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Volume 49 | Issue 1

Article 7

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1987

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### Recommended Citation

Carlson, Thomas A. and Riedesel, Elizabeth A. (1987) "What's Your Radiographic Diagnosis?," *Iowa State University Veterinarian*: Vol. 49 : Iss. 1 , Article 7.

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# What is Your Radiographic Diagnosis?

Thomas A. Carlson, BS, MS\*  
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## History and Physical Exam

A nine year-old castrated male Old English Sheepdog was referred to the Iowa State University Veterinary Teaching Hospital with a history of intermittent lameness of the left rear leg. Physical examination revealed soft tissue swelling of the left tarsus.

## Radiographs

Radiographs were taken of the left tarsus and are shown in figures A, B, and C.

## Radiographic Findings

The radiographs reveal bone lysis of the left tibiotarsus. Evidence of lysis is seen in all of the bony components of this joint. Soft tissue swelling is also present. No periosteal response is seen on the tibia, fibula or talus. A very minimal amount of periosteal new bone is seen on the lateral aspect of the calcaneus.

## Biopsy

A biopsy of the left tibia and soft tissue was performed and histopathologic examination revealed that the bony tissue present was normal except for areas of infiltration by ligamentous tissue filled with neoplastic spindle cells that seemed to be forming collagen. Proliferation of synovial membrane and areas of chronic inflammation were also noted.

## Diagnosis

A diagnosis of fibrosarcoma of the tibiotarsal joint was made and a left mid-femoral amputation was performed. The patient has done well at last note.

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## Discussion

Differential diagnoses in this case would include:

1. Synovial cell sarcoma (difficult to differentiate from fibrosarcoma).
2. Metastatic neoplasia.
3. Infection (no infectious agents were isolated from the biopsy tissue, and it is also atypical for infection to show primarily lytic changes with very little impression of new bone).
4. Primary bone tumor (uncommon here due to multiple bone involvement in focal area of joint).



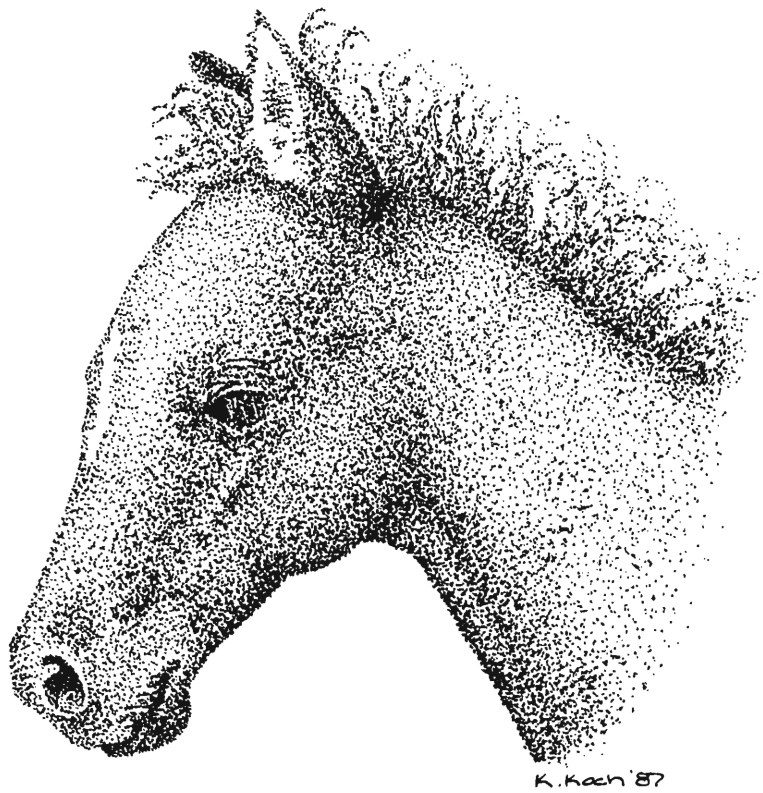
FIGURE A: Medial-Lateral view of left tarsus.



FIGURE B: Dorsal-plantar view of left tarsus.



FIGURE C: Dorsolateral-plantar medial oblique view of left tarsus.



K. Koch '87